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REMARKS

Claims 1-36 are all the claims presently pending in the application. Claims 5 and 22 are amended merely to make editorial changes.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-5, 18-22, and 34 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Egger et al. (U.S. Patent No. 6,233,571; hereinafter "Egger"). Claims 6-17, 23-33, 35, and 36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Egger in view of Anupam et al. (U.S. Patent No. 5,991,796; hereinafter "Anupam").

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention is directed to a collaborative Web research method.

In an illustrative, non-limiting embodiment of the invention, as defined by independent claim 1, a collaborative Web research method includes organizing a plurality of documents in a N-dimensional space according to a collection of subject words and, based on the organizing, retrieving, by a user, the documents organized in the N-dimensional space according to the collection of subject words.

In another exemplary embodiment of the invention, as defined by independent claim 6, a Web-based collaborative research method includes determining coordinates for pages which are

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retrieved by a first user and mapping the coordinates into a space, and based on the coordinates of the pages, informing a second user of a closeness of a research by the first user.

In another exemplary embodiment of the invention, as defined by independent claim 17, a method of collaborative network searching, includes tracking a plurality of users' accessing of pages in a network and, based on a closeness of at least first and second users, notifying the first and second users of one another's accessing of the pages.

In another exemplary embodiment of the invention, as defined by independent claim 18, a collaborative Web portal includes a tracker for tracking a user's bookmarks in accessing pages in a network, and for tracking preferences of the user, a unit for determining a closeness in research between users, and a notifier for notifying, based on the closeness, at least one other user of the user's bookmarks, the at least one other user having a similar interest to that of the user based on a distance function.

In another exemplary embodiment of the invention, as defined by independent claim 23, a Web-based collaborative research system includes a unit for determining coordinates for pages which are retrieved by a first user and mapping the coordinates into a space, and a notifier for informing, based on the coordinates of the pages, a second user of a closeness of a research by the first user.

Claims 34-36 recite somewhat similar embodiments of the invention, but are directed to, for example, a signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a method of collaborative Web research, a method of collaborative network searching, and a Web-based collaborative research method.

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In contrast with conventional navigation techniques, the spatial navigation technique according to the claimed invention does not rely exclusively on the traversal of links in order to retrieve documents from the World Wide Web. That is, the novel and unobvious distance function according to the claimed invention allows movement from one page to another without traversing a link (e.g., without opening up a document by clicking with a browser or the like) (e.g., see specification at page 14, lines 10-15).

In the spatial navigation model according to the claimed invention, the data blocks (Web pages, pictures and so forth) are indexed such that each data block resides in a specific point in a N-dimensional coordinate system. The placement of the data blocks in this coordinate system is performed such that data blocks which are relatively "close" to each other are related to the same subjects (e.g., see specification at page 14, lines 15-20).

Thus, the claimed invention provides, among other things, a method for navigating the Web which does not require traversal of HTML links (e.g., see specification at page 9, lines 21-22).

Moreover, the claimed invention provides a world Wide Web Portal which is capable of correlating the usage habits of each human researcher and is capable of notifying a researcher of a given topic that other researchers are currently working in related topics. This facility can be used by researchers to find potential collaborators for a research task, and can be used in knowledge management applications at research institutions (e.g., see specification at page 11, lines 18-23).

With the claimed invention, researchers can engage in efficient collaborative research. Further, the portal of the invention can correlate the usage habits of each human researcher and

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can automatically (or otherwise) notify a researcher of a given topic that other researchers are currently working in related topics (e.g., see specification at page 12, lines 1-5).

II. THE PRIOR ART REJECTIONS

A. Claims 1-5, 18-22, and 34 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Egger.

The Examiner alleges that Egger discloses all of the features of independent claims 1, 18, and 34. However, for at least the following reasons, Applicant respectfully disagrees with the Examiner's position, and therefore, traverses this rejection.

Independent claim 1 recites, *inter alia*:

organizing a plurality of documents in a N-dimensional space
according to a collection of subject words; and
based on said organizing, retrieving, by a user, said documents
organized in said N-dimensional space according to said collection
of subject words.

In other words, the collaborative Web research method according to the claimed invention does not rely exclusively on the traversal of links in order to retrieve documents from the World Wide Web. That is, the novel and unobvious distance function according to the claimed invention allows movement from one page to another without traversing a link (e.g., without opening up a document by clicking with a browser or the like) (e.g., see specification at page 14, lines 10-15).

In the Office Action, the Examiner alleges that Egger discloses a collaborative Web research method (citing Egger at column 48, lines 20-45) including organizing a plurality of documents (citing column 12, lines 40-45) in a N-dimensional space according to a collection of

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subject words (citing column 5, lines 45-48), and based on the organizing (citing column 12, lines 40-45), retrieving (citing column 5, lines 49-51), by a user (citing column 5, lines 55-58, and column 6, lines 25-27), the documents organized (citing column 12, lines 40-45) in the N-dimensional space (citing column 18, lines 32-40) according to the collection of subject words (citing column 16, lines 4-12), as claimed.

However, contrary to the Examiner's position, Applicant respectfully submits that Egger neither discloses nor suggests the claimed invention.

Indeed, Egger specifically discloses using those techniques (e.g., using Hyperlinks and "Web Crawling")(see Egger at column 49, lines 12-22; see also column 49, lines 46-47) which the present invention improves upon, and indeed, which clearly are different than the claimed invention (e.g., see specification at page 4, lines 17-22, and page 5, lines 13-21).

For example, Egger specifically states that:

The system accesses ling data 3004 or "crawls" the source web page (or source node 2008) looking for URLs which directly link the source web page to other web pages. Web crawling is a known technique in the art, performed by most World Wide Web search services, such as Yahoo (located at www.yahoo.com) or Alta Vista. Crawling is accomplished by the use of automated programs called robots or spiders, which analyze the web page for objects which provide URL links to other web pages or documents.

(see Egger at column 49, lines 12-22; emphasis added).

On the other hand, contrary to Egger, and as mentioned above, the novel and unobvious collaborative Web research method according to the claimed invention does not rely exclusively on the traversal of links in order to retrieve documents from the World Wide Web.

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That is, the novel and unobvious distance function according to the claimed invention allows movement from one page to another without traversing a link (e.g., without opening up a document by clicking with a browser or the like) (e.g., see specification at page 14, lines 10-15).

Particularly, independent claim 1 recites a collaborative Web research method including organizing a plurality of documents in a N-dimensional space according to a collection of subject words; and based on said organizing, retrieving, by a user, said documents organized in said N-dimensional space according to said collection of subject words.

For at least the foregoing reasons, Applicant respectfully submits that Egger neither discloses nor suggests all of the features of the claimed invention, in as complete detail as recited in independent claim 1. Therefore, Applicant submits that Eggers neither anticipates, nor renders obvious, the claimed invention defined by independent claim 1.

On the other hand, independent claim 18 recites, *inter alia*:

- a tracker for tracking a user's bookmarks in accessing pages in a network, and for tracking preferences of said user;
- a unit for determining a closeness in research between users;
- and
- a notifier for notifying, based on said closeness, at least one other user of said user's bookmarks, said at least one other user having a similar interest to that of said user based on a distance function.

As mentioned below, the Examiner specifically acknowledges that Egger does not disclose or suggest informing (i.e., notifying) a second user (see Office Action at pages 5-6, numbered paragraph 12).

Thus, Applicant respectfully submits that Egger clearly does not disclose or suggest at least "a notifier for notifying, based on said closeness, at least one other user of said user's

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bookmarks, said at least one other user having a similar interest to that of said user based on a distance function", as recited in independent claim 18.

On the other hand, independent claim 34 recites, *inter alia*:

organizing a plurality of documents a N-dimensional space
according to a collection of subject words; and
based on said organizing, retrieving said documents
organized in said N-dimensional space according to said collection
of subject words.

Applicant respectfully submits that independent claim 34 is patentable over Egger at least for somewhat similar reasons as those set forth above with respect to independent claim 1.

For at least the foregoing reasons, Applicant respectfully submits that Egger neither discloses nor suggests all of the features of the claimed invention, in as complete detail as recited in the claims. Therefore, Eggers neither anticipates, nor renders obvious, the claimed invention defined by claims 1-5, 18-22, and 34.

Accordingly, the Examiner respectfully is requested to withdraw this rejection and permit these claims to pass to immediate allowance.

B. Claims 6-17, 23-33, 35, and 36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Egger in view of Anupam.

The Examiner acknowledges that Egger does not disclose or suggest informing a second user about a closeness of a research by the first user, as claimed for example, in claim 6. However, the Examiner alleges that it would have been obvious to modify Egger based on Anupam to arrive at the claimed invention, because Anupam allegedly discloses "*informing a second user by the first user*" (see Office Action at pages 5-6, numbered paragraph 12).

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Thus, the Examiner alleges that it would have been obvious to combine Egger and Anupam to arrive at the claimed invention in order to provide *a user friendly computerized, web enabled, and intelligent research tool that emulates human method of research* (e.g., see Egger at column 3, lines 16-21).

Applicant respectfully disagrees for at least the following reasons, and therefore, respectfully traverses this rejection.

Applicant respectfully submits that it would not have been obvious to modify Egger based on Anupam to arrive at the claimed invention.

For example, independent claim 6 recites, *inter alia*:

determining coordinates for pages which are retrieved by a first user and mapping the coordinates into a space; and
based on said coordinates of said pages, informing a second user of a closeness of a research by said first user.

The claimed invention provides a Web based collaborative research method which is capable of correlating the usage habits of each human researcher and is capable of notifying a researcher of a given topic that other researchers are currently working, or have worked on, in related topics. This facility can be used by researchers to find potential collaborators for a research task, and can be used in knowledge management applications at research institutions (e.g., see specification at page 11, lines 18-23).

Moreover, with the claimed invention, researchers can engage in efficient collaborative research. Further, the portal of the invention can correlate the usage habits of each human researcher and can automatically (or otherwise) notify a researcher of a given topic that other researchers are currently working in related topics (e.g., see specification at page 12, lines 1-5).

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In comparison, Anupam merely discloses a collaborative browsing session (e.g., see Anupam at Abstract).

That is, Anupam merely permits the users to follow the browsing of other users.

Particularly, Anupam discloses that, when one of the surrogates detects a change by a collaborator of a uniform resource locator (URL), the new URL is communicated through controllers to the surrogates of all other collaborators in the session.

Thus, the collaborators are able to move from one URL to another to browse information in a synchronous manner (e.g., see Anupam at Abstract; see also column 2, lines 36-39; and column 4, lines 29-32).

Applicant respectfully submits that merely informing the collaborators of a change from one URL to another to permit the collaborators to browse information in a synchronous manner clearly is different than the claimed invention and would not have lead the ordinarily skilled artisan to modify Egger to arrived at the claimed invention.

Indeed, neither Egger nor Anupam discloses, suggests, or for that matter even mentions, “based on said coordinates of said pages, informing a second user of a closeness of a research by said first user”, as recited in independent claim 6 (emphasis added).

Moreover, even assuming *arguendo* that it would have been obvious to combine Egger and Anupam, Applicant submits that the resulting combination clearly would not arrive at the claimed invention recited, for example, in independent claim 6.

That is, as mentioned above, neither Egger nor Anupam discloses, suggests, or for that matter even mentions, “based on said coordinates of said pages, informing a second user of a closeness of a research by said first user”, as recited in independent claim 6 (emphasis added).

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Thus, for at least the foregoing reasons, Applicant respectfully submits that it would not have been obvious to combine Egger and Anupam to arrive at the claimed invention, and even if combined, the resulting combination clearly would not disclose or suggest the claimed invention.

Applicant submits that independent claims 17, 23, 35, and 36 also are patentable over the alleged combination of Egger and Anupam for somewhat similar reasons as independent claim 6.

For example, independent claim 17 recites, *inter alia*:

tracking a plurality of users' accessing of pages in a network;
and
based on a closeness of at least first and second users, notifying
said first and second users of one another's accessing of said
pages.

On the other hand, independent claim 23 recites, *inter alia*:

a unit for determining coordinates for pages which are
retrieved by a first user and mapping the coordinates into a space;
and
a notifier for informing, based on said coordinates of said
pages, a second user of a closeness of a research by said first user.

Further, independent claim 35 recites, *inter alia*:

tracking a plurality of users' accessing of pages in a network;
and
based on a closeness of at least first and second users, notifying
said first and second users of one another's accessing of said
pages.

Also, independent claim 36 recites, *inter alia*:

determining coordinates for pages which are retrieved by a first
user and mapping the coordinates into a space; and
based on said coordinates of said pages, informing a second
user of a closeness of a research by said first user.

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Thus, for at least the foregoing reasons, Applicant respectfully submits that it would not have been obvious to combine Egger and Anupam to arrive at the claimed invention, and even if combined, the resulting combination clearly would not disclose or suggest the claimed invention, as defined by claims 6-17, 23-33, 35, and 36.

Accordingly, the Examiner respectfully is requested to withdraw this rejection and permit these claims to pass to immediate allowance.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-36, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

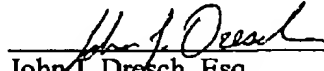
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The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully submitted,

Date: JULY 8, 2004

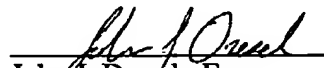

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CERTIFICATE OF TRANSMISSION

I certify that I transmitted via facsimile to (703) 872-9306 the enclosed Amendment under 37 C.F.R. § 1.111 to Examiner Mohammad A. Siddiqi on July 8, 2004.


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